

Table 16-1: Core Categories for Estimation of Sediment Inventories

Core Category	Total DDT Count ^a (percent)	2,3,7,8-TCDD Count ^a (percent)	Mercury Count ^a (percent)	Total PCB Count ^a (percent)
Bottom Concentration below reporting limit	41 (34 percent)	23 (21 percent)	32 (28 percent)	70 (61 percent)
Concentration decreasing at depth	36 (30 percent)	59 (54 percent)	28 (24 percent)	14 (12 percent)
Concentration elevated or increasing at depth	43 (36 percent)	27 (25 percent)	56 (48 percent)	30 (26 percent)
Total	120 (100 percent)	109 (100 percent)	116 (100 percent)	114 (100 percent)

a: Core count based on 1991 and 1995 data.

Table 16-2: Total Contaminant Mass Sorted by Sediment Texture

Sediment Texture	Total DDT Mass (kg) ^a	2,3,7,8-TCDD Mass (kg) ^a	Mercury Mass (kg) ^a	Total PCB Mass (kg) ^a
Coarse Material	150	1.4 ^b	2,700	500 ^b
Sand	4.0 ^b	0.92 ^b	130 ^b	67 ^b
Silt/Sand	150	0.88	1,200	430
Silt	6,100	17	20,000	5000

a: MPA calculation covers RM1 to RM7; values rounded to two significant figures.

b: MPA calculation based on less than two data points.

Table 16-3: Total Contaminant Mass Sorted by Core Classification

Core Classification	Total DDT Mass (kg) and Percent ^a	2,3,7,8-TCDD Mass (kg) and Percent ^a	Mercury Mass (kg) and Percent ^a	Total PCB Mass (kg) and Percent ^a
Bottom Concentration below reporting limit	190 (3.0 percent)	0.7 (3.6 percent)	6,300 (27 percent)	2,900 (48 percent)
Concentration decreasing at depth	2,300 (36 percent)	14 (69 percent)	6,000 (25 percent)	990 (16 percent)
Concentration elevated or increasing at depth	4,000 (62 percent)	5.4 (28 percent)	11,000 (48 percent)	2,200 (36 percent)

a: MPA calculation covers RM1 to RM7; values rounded to two significant figures.

Table 16-4: Volume-weighted Average Concentrations

Sediment Texture	Total DDT (mg/kg) ^a	2,3,7,8-TCDD (mg/kg) ^a	Mercury (mg/kg) ^a	Total PCB (mg/kg) ^a
Coarse Material	0.37	0.0071	4.3	3.9
Sand	0.29	0.0042	9.8	4.9
Silt/Sand	0.54	0.0032	4.6	2.4
Silt	2.8	0.0070	8.0	2.8
Core Classification	Total DDT (mg/kg)	2,3,7,8-TCDD (mg/kg)	Mercury (mg/kg)	Total PCB (mg/kg)
Bottom Concentration below reporting limit	0.28	0.0010	8.3	2.4
Concentration decreasing at depth	2.0	0.0077	5.4	3.4
Concentration elevated or increasing at depth	4.0	0.011	7.6	3.6

a: MPA calculation covers RM1 to RM7; values rounded to two significant figures.

Table 16-5: Extrapolated Depth of contamination, Contaminant Mass, and Sediment Volume

Analyte	Average Depth of Contamination (feet) ^a	Volume of Sediment (cubic yards) ^a	Extrapolated Depth of Contamination (feet) ^{a,b}	Extrapolated Contaminant Mass (kg) ^{a,b}	Extrapolated Volume of Sediment (cubic yards) ^{a,b}
Total DDT	7.4	4.5 million	11	11,000	6.6 million
2,3,7,8-TCDD	8.0	4.9 million	11	29	6.5 million
Total PCB	5.7	3.5 million	7.6	8,000	4.7 million
Mercury	8.6	5.3 million	13	37,000	8.0 million

a: MPA calculation covers RM1 to RM7; values rounded to two significant figures.

b: Extrapolated values calculated by increasing the depth by 25 percent for “contaminant concentrations decreasing at depth” and doubling the depth for “contaminant concentrations elevated or increasing at depth.”

Table 16-6: Summary of Contaminant Inventory Estimates

Inventory Estimate ^a	Total DDT (Metric ton) ^b	2,3,7,8-TCDD (kg) ^b	Mercury (Metric ton) ^b	Total PCB (Metric ton) ^b
Interpolated	6.4	20	24	6
Extrapolated	11	29	37	8
Percent Increase ^c	72 percent	45 percent	54 percent	33 percent

a: See text for discussion.

b: Estimates rounded to two significant figures (when appropriate); 2,3,7,8-TCDD is in units of kilograms.

c: Percent increase is relative to the interpolated mass estimate.

Table 16-7: Estimated Mass and Estimated Volume of Mercury-Contaminated Sediments

Analyte	Average Extrapolated MPA (g/m ²)	Extrapolated Mercury Mass (kilograms)	Average Extrapolated Depth (feet)	Extrapolated Volume of Sediment (cubic yards)
RM0 to RM0.9	23	7,400	14	1,800,000
RM0.9 to RM7	19	37,000	13	6,500,000
RM7 to RM8	22	5,500	12	1,200,000
Total RM0 to RM8	20	50,000	13	9,500,000
RM8 to RM15 ^a	14	4,900	11	1,500,000
RM8 to RM15 ^b	5.2	1,800	4	550,000

a: Values were calculated for the fine-grained sediments only by assuming the average extrapolated mass per unit area and depth of contamination from RM6 to RM7. The inventory in the coarse-grained sediment was not calculated.

b: Values were calculated assuming average depth of contamination of approximately 4 feet based on the geotechnical and high resolution cores collected above RM8.

Table 16-8: Estimated Mass and Estimated Volume of 2,3,7,8-TCDD-Contaminated Sediments

Analyte	Average Extrapolated MPA (mg/m ²)	Extrapolated 2,3,7,8-TCDD Mass (kilograms)	Average Extrapolated Depth (feet)	Extrapolated Volume of Sediment (cubic yards)
RM0 to RM0.9	6.5	2	12	1,500,000
RM0.9 to RM7	19	29	11	6,500,000
RM7 to RM8	11	2.4	7.8	660,000
Total RM0 to RM8	16	33	11	8,700,000
RM8 to RM15 ^a	8.5	2.9	11	1,200,000
RM8 to RM15 ^b	3.1	1.1	4	550,000

a: Values were calculated for the fine-grained sediments only by assuming the average extrapolated mass per unit area and depth of contamination from RM6 to RM7. The inventory in the coarse-grained sediment was not calculated.

b: Values were calculated assuming average depth of contamination of approximately 4 feet based on the geotechnical and high resolution cores collected above RM8.

Table 16-9: Summary of MPA Estimates for Individual Low-Resolution Sediment Cores Above RM8

Analyte	Estimated MPA ^a		
	Minimum	Median	Maximum
Total DDT (g/m ²)	0.030	0.17	2.3
2,3,7,8-TCDD (mg/m ²)	0.013	0.79	24
Total PCB (g/m ²)	0.25	1.7	36
Mercury (g/m ²)	0.66	5.5	28

a: Values rounded to two significant figures.

Table 16-10: Summary of Measured and Extrapolated MPA Estimates Below RM8

Analyte	MPA Estimate Based on Measured Data ^a			MPA Estimated Based on Extrapolated Cores ^a		
	Minimum	Median	Maximum	Minimum	Median	Maximum
Total DDT (g/m ²)	0.0025	0.45	3100	0.002	0.62	6300
2,3,7,8-TCDD (mg/m ²)	0.0016	2.4	1300	0.002	3.4	2600
Total PCB (g/m ²)	0.014	2.2	35	0.018	3.6	35
Mercury (g/m ²)	0.069	9.7	64	0.069	15	107

a: Values rounded to two significant figures.

Table 16-11: Results of Median Test Comparing MPA Estimates Above and Below RM8

Analyte	Chi Square for Median Test Comparing MPA Estimates Above RM8 and MPA Estimates (Based on Measured Data) Below RM8 ^a	Chi Square for Median Test Comparing MPA Estimates Above RM8 and MPA Estimates (Based on Extrapolated Cores) Below RM8 ^a
Total DDT	0.32	0.044
2,3,7,8-TCDD	0.033	0.033
Total PCB	0.84	0.25
Mercury	0.11	0.037

a: Values rounded to two significant figures. Results indicating statistically different medians are in bold.

Table 16-12: Estimated Contaminant Inventory Above RM8

River Mile	Sediment Texture	Total DDT (Metric tons) ^{a, b}	2,3,7,8-TCDD (kg) ^{a, b}	Total PCB (Metric tons) ^{a, c}	Mercury (Metric tons) ^{a, c}
RM8 to RM12	Silt	0.083	0.68	0.87	1.5
	Silt/Sand	0.016	0.13	0.16	0.28
	Total	0.099	0.81	1.0	1.8
RM8 to RM15	Silt	0.087	0.72	0.91	1.6
	Silt/Sand	0.092	0.75	0.95	1.6
	Total	0.18	1.5	1.9	3.2

a: Values rounded to two significant figures.

b: Inventory estimates above RM8 for Total DDT and 2,3,7,8-TCDD are best represented by RM8 to RM12 since the most significant sources of these contaminants are in the Lower Passaic River. See text for discussion.

c: Inventory estimates above RM8 for Total PCB and mercury are best represented by estimates in RM8 to RM15 since it appears that significant loading of these contaminants is derived from the Upper Passaic River. See text for discussion.

Table 16-13: Comparison of Inventory Estimates Above and Below RM8

River Mile	Estimated Inventory	Total DDT (Metric tons) ^{a, b}	2,3,7,8-TCDD (kg) ^{a, b}	Total PCB (Metric tons) ^{a, c}	Mercury (Metric tons) ^{a, c}
Below RM8 (all sediment textures)	Mass (based on extrapolated cores)	11	29	8	37
RM8 to RM12 (silt, silt and sand)	Mass	0.099	0.81	1.0	1.8
	Percent of Inventory Below RM8	0.9 %	2.8 %	13 %	4.9 %
RM8 to RM15 (silt, silt and sand)	Mass	0.18	1.5	1.9	3.2
	Percent of Inventory Below RM8	1.6 %	5.1 %	24 %	8.6 %

a: Values rounded to two significant figures.

b: Inventory estimates above RM8 for Total DDT and 2,3,7,8-TCDD are best represented by RM8 to RM12 since the most significant sources of these contaminants are in the Lower Passaic River. See text for discussion.

c: Inventory estimates above RM8 for Total PCB and mercury are best represented by estimates in RM8 to RM15 since it appears that significant loading of these contaminants is derived from the Upper Passaic River. See text for discussion.

Table 20-1: Comparison on the Average 1980s Concentrations and 2005 Surface Sediment Concentrations for Select COPCs

Analyte	Average 1980s Decadal Concentration	Average 2005 Surface Sediment Concentration
Mercury (mg/kg)	3.3	1.8
Lead (mg/kg)	320	210
Copper (mg/kg)	180	150
Total Chlordane ($\mu\text{g}/\text{kg}$)	85	70
Dieldrin ($\mu\text{g}/\text{kg}$)	2.4	5.8
DDE ($\mu\text{g}/\text{kg}$)	110	54
2,3,7,8-TCDD (ng/kg) ^a	560	430
PCDD/F TEQ ($\mu\text{g}/\text{kg}$ ^{a, b})	0.67	0.49
Total PCB ($\mu\text{g}/\text{kg}$ ^a)	2,500	1,000
PCB TEQ ($\mu\text{g}/\text{kg}$ ^{a, b})	0.16	0.083
LMW PAH (mg/kg)	10	10
HMW PAH (mg/kg)	25	28

a: Average decadal concentration for only three river locations (RM1.4, RM2.2, and RM11)

b: Mammal TEQ estimate

Concentrations rounded to two significant figures.

Table 20-2: Estimated Half-Lives for COPCs Based on High Resolution Cores from 2005 and Surface Samples in 2007.

Analyte	Half Life 1980-2007 (years)
Mercury (mg/kg)	30
Lead (mg/kg)	35
Copper (mg/kg)	50
Total Chlordane ($\mu\text{g}/\text{kg}$)	∞^1
DDE ($\mu\text{g}/\text{kg}$)	20
Dieldrin ($\mu\text{g}/\text{kg}$)	∞^2
2,3,7,8-TCDD (ng/kg) ^a	25
PCDD/F TEQ ($\mu\text{g}/\text{kg}$ ^a)	25
Total PCB ($\mu\text{g}/\text{kg}$ ^a)	20
PCB TEQ ($\mu\text{g}/\text{kg}$ ^a)	20
HMW PAH (mg/kg)	∞^1
LMW PAH (mg/kg)	25

1 No statistically significant trend – assume flat trend (infinite half-life)

2 Increasing trend - assume flat trend (infinite half-life)

Note: half-life estimates are rounded to the nearest 5 years.

Table 20-3: Unitless TEF Values for Mammal, Fish and Bird Exposure

Analyte	1998 Mammal TEF	2005 Mammal TEF	Fish TEF	Bird TEF
PCDD/F TEF Values				
2,3,7,8- TCDD	1	1	1	1
1,2,3,7,8-PeCDD	1	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.001	0.001
OCDD	0.0001	0.0003	0.0001	0.0001
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.3	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.01
OCDF	0.0001	0.0003	0.0001	0.0001
PCB TEF Values				
3,3',4,4'-Tetrachlorobiphenyl (77)	0.0001	0.0001	0.0001	0.05
3,4,4',5-Tetrachlorobiphenyl (81)	0.0001	0.0003	0.0005	0.1
3,3',4,4',5-Pentachlorobiphenyl (126)	0.1	0.1	0.005	0.1
3,3',4,4',5,5'-Hexachlorobiphenyl (169)	0.01	0.03	0.00005	0.001
2,3,3',4,4'-Pentachlorobiphenyl (105)	0.0001	0.00003	0.000005	0.0001
2,3,4,4',5-Pentachlorobiphenyl (114)	0.0005	0.00003	0.000005	0.0001
2,3',4,4',5-Pentachlorobiphenyl (118)	0.0001	0.00003	0.000005	0.00001
3,4,4',5-Pentachlorobiphenyl (123)	0.0001	0.00003	0.000005	0.00001
2,3,3',4,4',5-Hexachlorobiphenyl (156)	0.0005	0.00003	0.000005	0.0001
2,3,3',4,4',5'-Hexachlorobiphenyl (157)	0.0005	0.00003	0.000005	0.0001
2,3',4,4',5,5'-Hexachlorobiphenyl (167)	0.00001	0.00003	0.000005	0.00001
2,3,3',4,4',5,5'-Heptachlorobiphenyl (189)	0.0001	0.00003	0.000005	0.00001

Data source: Van den Berg *et al.*, 1998 and Van den Berg *et al.*, 2005.

Table 20-4: Multipliers for estimated TEQs for Dioxin and PCBs

TEQ Comparison	Ratio
Fish TEQ / 2,3,7,8-TCDD concentration	1.2
Bird TEQ / 2,3,7,8-TCDD concentration	1.4
2005 Mammal TEQ / 2,3,7,8-TCDD concentration	1.3
Fish TEQ / Total PCB concentration	1.4×10^{-6}
Bird TEQ / Total PCB concentration	2.6×10^{-4}
2005 Mammal TEQ / Total PCB concentration	2.1×10^{-5}

Table 20-5: Relationship Between Recently Deposited Surface Sediment Concentrations and Mean Surface Concentrations for the Lower Passaic River

Analyte	Dated Sediment Core 1990s Decadal Concentration (mean ±standard error) ^a	1995 TSI Surface Concentration (mean ±standard error) ^b	Ratio of 1995 Surface Sediment to 1990 Decade (mean ±standard error)
Mercury (mg/kg)	2.0 ± 0.11	3.3 ± 0.22	1.7 ± 0.14
Lead (mg/kg)	240 ± 11	330 ± 15	1.4 ± 0.09
Copper (mg/kg)	150 ± 6.8	230 ± 25	1.5 ± 0.18
Total Chlordane (µg/kg)	85 ± 4.2	47 ± 4.0	1^c
DDE (µg/kg)	59 ± 2.9	66 ± 6.4	1.7
Dieldrin (µg/kg)	7.2 ± 1.9	25 ± 2.5	3.5 ± 0.98
2,3,7,8-TCDD (ng/kg)	0.29 ± 0.03	0.82 ± 0.21	2.9 ± 0.79
Total PCB (µg/kg)	$1,300 \pm 110$	$1,300 \pm 180$	1.0 ± 0.17
HMW PAH (mg/kg)	$29,000 \pm 1,400$	$39,000 \pm 15,000$	1.4 ± 0.53

a: Average 1990 decadal concentration (excluding the 2000-2005 samples) and standard error on the average.

b: Average 1995 surface sediment concentration (0 to 6 inches) and standard error on the average.

c: Actual ratio is less than 1.

Table 20-6: Forecasted Surface Sediment Concentrations for the MNR Response

Analyte	Forecasted 2075 Concentration	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	1.1	51
Lead (mg/kg)	130	40
Copper (mg/kg)	100	33
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	32	None predicted
DDE ($\mu\text{g}/\text{kg}$)	18	59
Dieldrin ($\mu\text{g}/\text{kg}$)	14	None predicted
2,3,7,8-TCDD (ng/kg)	70	82
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.089	82
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.097	82
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.087	82
Total PCB ($\mu\text{g}/\text{kg}$)	520	55
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.018	55
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.014	55
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.29	55
HMW PAH (mg/kg)	37	None predicted

Concentrations rounded to two significant figures.

Table 20-7: Forecasted Biologically Active Layer Concentrations for the MNR Response

Analyte	Forecasted 2075 Concentration	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	1.9	51
Lead (mg/kg)	180	40
Copper (mg/kg)	150	33
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	110	None predicted
DDE ($\mu\text{g}/\text{kg}$)	18	59
Dieldrin ($\mu\text{g}/\text{kg}$)	49	None predicted
2,3,7,8-TCDD (ng/kg)	250	82
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.20	82
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.28	82
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.26	82
Total PCB ($\mu\text{g}/\text{kg}$)	520	55
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.018	55
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.014	55
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.29	55
HMW PAH (mg/kg)	51	None predicted

Concentrations rounded to two significant figures.

Table 20-8: Forecasted Surface Sediment Concentrations for Remediation of the Primary Erosional Zone and the Primary Inventory Zone

Analyte	Forecasted 2075 Concentration	Immediate Percent Reduction in 2018 due to Remediation	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	1.1	21	52
Lead (mg/kg)	130	22	42
Copper (mg/kg)	98	22	36
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	31	17	3
DDE ($\mu\text{g}/\text{kg}$)	18	21	59
Dieldrin ($\mu\text{g}/\text{kg}$)	12	28	15
2,3,7,8-TCDD (ng/kg)	51	45	87
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.071	45	87
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.065	45	87
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.064	45	87
Total PCB ($\mu\text{g}/\text{kg}$)	520	21	55
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.29	22	55
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0014	21	55
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.019	21	55
HMW PAH (mg/kg)	36	16	2

Concentrations rounded to two significant figures.

Table 20-9: Forecasted Average Concentrations for the Upper Six Inches of Sediment for remediation of the Primary Erosional Zone and the Primary Inventory Zone

Analyte	Forecasted 2075 Concentration	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	1.1	70
Lead (mg/kg)	130	58
Copper (mg/kg)	99	57
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	30	74
DDE ($\mu\text{g}/\text{kg}$)	18	75
Dieldrin ($\mu\text{g}/\text{kg}$)	11	77
2,3,7,8-TCDD (ng/kg)	70	94
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.097	94
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.089	94
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.087	94
Total PCB ($\mu\text{g}/\text{kg}$)	540	55
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.30	55
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0014	55
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.019	55
HMW PAH (mg/kg)	34	34

Concentrations rounded to two significant figures.

Table 20-10: Forecasted Surface Sediment Concentrations for Dredging and Capping RM0 to RM8

Analyte	Forecasted 2075Concentration	Immediate Percent Reduction in 2018 due to Remediation	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	0.99	48	57
Lead (mg/kg)	110	50	48
Copper (mg/kg)	87	49	43
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	29	37	10
DDE ($\mu\text{g}/\text{kg}$)	17	49	61
Dieldrin ($\mu\text{g}/\text{kg}$)	7.7	62	45
2,3,7,8-TCDD (ng/kg)	25	84	94
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.035	86	94
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.032	83	94
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.031	85	94
Total PCB ($\mu\text{g}/\text{kg}$)	500	48	57
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.29	50	55
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0013	48	57
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.017	48	58
HMW PAH (mg/kg)	34	37	8

Concentrations rounded to two significant figures.

Table 20-11: Forecasted Average Concentrations for Upper Six Inches of Sediment for Capping and Dredging RM0 to RM8

Analyte	Forecasted 2075 Concentration	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	0.99	75
Lead (mg/kg)	110	65
Copper (mg/kg)	83	64
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	27	76
DDE ($\mu\text{g}/\text{kg}$)	17	78
Dieldrin ($\mu\text{g}/\text{kg}$)	7.1	86
2,3,7,8-TCDD (ng/kg)	29	97
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.040	97
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.037	97
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.036	97
Total PCB ($\mu\text{g}/\text{kg}$)	490	58
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.27	58
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0013	58
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.017	57
HMW PAH (mg/kg)	31	40

Concentrations rounded to two significant figures.

Table 20-12: Forecasted Surface Sediment Concentrations for Dredging and Capping RM0 to RM12

Analyte	Forecasted 2075 Concentration	Immediate Percent Reduction in 2018 due to Remediation	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	0.96	55	58
Lead (mg/kg)	110	57	50
Copper (mg/kg)	82	56	46
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	28	43	12
DDE ($\mu\text{g}/\text{kg}$)	17	55	62
Dieldrin ($\mu\text{g}/\text{kg}$)	6.4	71	55
2,3,7,8-TCDD (ng/kg)	15	94	96
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.021	94	96
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.019	94	96
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.019	94	96
Total PCB ($\mu\text{g}/\text{kg}$)	490	54	58
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.27	56	58
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0013	54	58
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.017	54	58
HMW PAH (mg/kg)	33	42	11

Concentrations rounded to two significant figures.

Table 20-13: Forecasted Concentrations for Upper Six Inches of Sediment for Capping and Dredging RM0 to RM8

Analyte	Forecasted 2075 Concentration	Percent Reduction from 2005 to 2075
Mercury (mg/kg)	0.93	76
Lead (mg/kg)	100	67
Copper (mg/kg)	77	67
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	26	77
DDE ($\mu\text{g}/\text{kg}$)	16	79
Dieldrin ($\mu\text{g}/\text{kg}$)	5.8	88
2,3,7,8-TCDD (ng/kg)	17	99
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.023	99
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.021	99
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.021	99
Total PCB ($\mu\text{g}/\text{kg}$)	470	60
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.26	60
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0012	60
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.016	59
HMW PAH (mg/kg)	30	42

Concentrations rounded to two significant figures.

Table 20-14: Summary of Forecasted 2075 Surface Sediment Concentrations

Analyte	MNR Response	Primary Erosional Zone	Capping RM0 to RM8	Capping RM0 to RM12
Mercury (mg/kg)	1.1	1.1	0.99	0.96
Lead (mg/kg)	130	130	110	110
Copper (mg/kg)	100	98	87	82
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	32	31	29	28
DDE ($\mu\text{g}/\text{kg}$)	18	18	17	17
Dieldrin ($\mu\text{g}/\text{kg}$)	14	12	7.7	6.4
2,3,7,8-TCDD (ng/kg)	70	63	25	17
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.097	0.087	0.035	0.023
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.089	0.080	0.032	0.021
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.087	0.078	0.031	0.021
Total PCB ($\mu\text{g}/\text{kg}$)	520	520	500	490
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.29	0.29	0.29	0.27
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0014	0.0014	0.0013	0.0013
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.018	0.019	0.017	0.017
HMW PAH (mg/kg)	37	36	34	33

Concentrations rounded to two significant figures.

Table 20-15: Summary of Forecasted 2075 Concentrations for the Top Six Inches of Sediment (Capped Areas)

Analyte	MNR Response	Primary Erosional Zone	Capping RM0 to RM8	Capping RM0 to RM12
Mercury (mg/kg)	1.9	1.1	0.99	0.93
Lead (mg/kg)	180	130	110	100
Copper (mg/kg)	150	99	83	77
Chlordane, gamma ($\mu\text{g}/\text{kg}$)	110	30	27	26
DDE ($\mu\text{g}/\text{kg}$)	31	19	17	16
Dieldrin ($\mu\text{g}/\text{kg}$)	49	11	7.1	5.8
2,3,7,8-TCDD (ng/kg)	200	87	29	17
PCDD/F TEQ Bird ($\mu\text{g}/\text{kg}$)	0.28	0.12	0.04	0.023
PCDD/F TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.26	0.11	0.04	0.021
PCDD/F TEQ Fish ($\mu\text{g}/\text{kg}$)	0.25	0.11	0.04	0.021
Total PCB ($\mu\text{g}/\text{kg}$)	520	540	490	470
PCB TEQ Mammal ($\mu\text{g}/\text{kg}$)	0.29	0.30	0.27	0.26
PCB TEQ Bird ($\mu\text{g}/\text{kg}$)	0.0014	0.0014	0.0013	0.0012
PCB TEQ Fish($\mu\text{g}/\text{kg}$)	0.018	0.019	0.017	0.016
HMW PAH (mg/kg)	51	34	31	30

Concentrations rounded to two significant figures.